

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for **managing cluster allocation** ~~an application client to interface with a device driver~~ in a client device with persistent storage, comprising the steps of:

**allocating a plurality of clusters of a hard disk as a buffer file;**

**causing a plurality of media content instances to be written to the buffer file, wherein each instance of said plurality is stored on one or more clusters in the buffer file;**

**creating a normal play time pointer for each stored media content instance, wherein each normal play time pointer points to the location of the cluster or clusters on which its corresponding media content instance is stored;**

**storing the normal play time pointers in** ~~maintaining a data record for media content instances stored on~~ **the** ~~[[a]]~~ hard disk;

~~commanding the device driver to provide normal play time locations of the media content instances for storage of the normal play time locations in the data record; and~~

~~using the normal play time~~ **pointers** ~~locations~~ to reference the media content instances stored in the clusters of the hard disk;

**storing a list of the clusters allocated as the buffer file in the data record;**

**maintaining the size of the buffer file substantially constant over time, such that when the buffer file approaches a full status, the cluster storing the oldest media content instance is deallocated from the buffer file, and a new cluster is allocated to the buffer file; and**

**updating the data record as clusters are deallocated from, and newly allocated to, the buffer file.**

2-3. (Canceled)

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

4. (Currently Amended) The ~~interfacing~~ method of claim 1 [[2]], further comprising the steps of receiving a user request to designate one of the media content instances stored in of the buffer file as permanent and designating the requested media content instance as a permanent file.

5. (Currently Amended) The ~~interfacing~~ method of claim 4, further comprising the step of using ~~passing~~ the normal play time pointer ~~locations~~, of the media content instance requested by the user, ~~from the data record to the device driver in order to enable the device driver~~ to locate the requested media content instance.

6. (Currently Amended) The ~~interfacing~~ method of claim 4, further comprising the steps of updating ~~receiving, from the device driver,~~ the normal play time pointer ~~locations~~ corresponding to the permanent file, and storing the updated normal play time pointer ~~locations~~ in the data record.

7. (Canceled)

8. (Currently Amended) The ~~interfacing~~ method of claim 1, further comprising the steps of storing in the data record real-time start and stop time values of the stored media content instances, wherein the real-time start and stop time values are retrieved from a media content instance guide database, and using the stop time values to determine the stop times of the stored media content instances.

9. (Currently Amended) The ~~interfacing~~ method of claim 1, further comprising the steps of receiving and storing in the data record real-time start and stop buffering times and real-time permanent recording times provided by an operating system.

10. (Currently Amended) A method for managing cluster allocation ~~an application client to interface with a device driver~~ in a client device with persistent storage, comprising the steps of:

Amendment in Response to Office Action mailed Aug. 8, 2008  
U.S. Patent Application No. 10/010,781

allocating a plurality of clusters of a hard disk as a buffer file, wherein a plurality of media content instances are written to the buffer file, and wherein each instance of said plurality is stored on one or more clusters in the buffer file;

creating a normal play time pointer for each stored media content instance, wherein each normal play time pointer points to the location of the cluster or clusters on which its corresponding media content instance is stored;

storing the normal play time pointers in a data record for the hard disk;

storing a list of the clusters allocated as the buffer file in the data record;

using normal play time pointers ~~locations~~ to reference the stored media content instances of a buffer file stored in clusters of a hard disk; and

designating one of the referenced media content instances of the buffer file as a permanent file;

maintaining the size of the buffer file substantially constant over time, such that when a media content instance is designated permanent, the cluster or clusters on which it is stored are deallocated from the buffer file, and a corresponding cluster or clusters are newly allocated to the buffer file; and

updating the data record as clusters are deallocated from, and newly allocated to, the buffer file.

11-12. (Canceled)

13. (Currently Amended) The ~~interfacing~~ method of claim 10, wherein said designation step is responsive to ~~further comprising the steps of receiving a user request to designate the one of the media content~~ instance ~~instances of the buffer file as permanent and designating the requested media content instance as a permanent file.~~

14. (Currently Amended) The ~~interfacing~~ method of claim 13, further comprising the step of using ~~passing~~ the normal play time pointer ~~locations~~, of the media content instance requested

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

by the user, ~~from a data record to the device driver in order to enable the device driver~~ to locate the requested media content instance.

15. (Currently Amended) The ~~interfacing~~ method of claim 10, **wherein said updating step comprises updating** ~~further comprising the steps of receiving, from the device driver, the normal play time pointer locations corresponding to the permanent file and storing the updated normal play time pointer locations in the [[a]] data record.~~

16. (Canceled)

17. (Currently Amended) The ~~interfacing~~ method of claim 10, further comprising the steps of storing in **the** [[a]] data record real-time start and stop time values for the **stored** media content instances, wherein the real-time start and stop time values are retrieved from a media content instance guide database, and using the stop time values to determine the stop times of the **stored** media content instances.

18. (Currently Amended) The ~~interfacing~~ method of claim 10, further comprising the steps of receiving and storing in **the** [[a]] data record real-time start and stop buffering times and real-time permanent recording times provided by an operating system.

19. (Currently Amended) A method for **managing cluster allocation** ~~an application client to interface with a device driver~~ in a client device with persistent storage, comprising the steps of:

~~commanding the device driver to allocate~~ **allocating** a substantially constant **number of clusters** ~~size portion~~ of a hard disk for a buffer file for buffering media content instances, **wherein a plurality of media content instances are written to the buffer file, and wherein each instance of said plurality is stored on one or more clusters in the buffer file;**

maintaining a data record for the media content instances stored in clusters of the buffer file;

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

storing in the data record real-time start and stop time values of the **stored** media content instances, wherein the real-time start and stop time values are retrieved from a media content instance guide database, and using the stop time values to determine the stop times of the **stored** media content instances;

**creating a normal play time pointer for each stored media content instance, wherein each normal play time pointer points to the location of the cluster or clusters on which its corresponding media content instance is stored;**

**storing the normal play time pointers in the data record;**

~~commanding the device driver to provide normal play time locations of the media content instances corresponding to the buffer file, the media content instances of the buffer file, and the current write location;~~

~~receiving, from the device driver, the normal play time locations of the media content instances corresponding to the buffer file, the media content instances of the buffer file, and the current write location;~~

~~storing the normal play time locations in the data record;~~

**storing a list of the clusters allocated as the buffer file in the data record;**

receiving a user request to designate one of the **stored** media content instances ~~of the buffer file as permanent;~~ and designating the requested media content instance as a permanent file;

**using** passing the normal play time **pointer** ~~locations,~~ of the media content instance requested by the user, ~~from the data record to the device driver in order to enable the device driver to~~ locate the requested media content instance; ~~and~~

designating the identified media content instance as a permanent recording file;

**maintaining the substantially constant number of clusters in the buffer file by a reallocation process in which, when the buffer file approaches a full status, the cluster storing the oldest media content instance is deallocated from the buffer file, and a new cluster is allocated to the buffer file, and when a media content instance is designated permanent, the cluster or clusters on which it is stored are deallocated from the buffer file, and a corresponding cluster or clusters are newly allocated to the buffer file; and**

Amendment in Response to Office Action mailed Aug. 8, 2008  
U.S. Patent Application No. 10/010,781

updating the data record as clusters are deallocated from, and newly allocated to, the buffer file.

20. (Currently Amended) ~~An interfacing A~~ system **for managing cluster allocation** that enables an application client to interface with a device driver in a client device with persistent storage, comprising:

a memory with logic; and

a processor configured with the logic to:

**allocate a plurality of clusters of a hard disk as a buffer file;**

**cause a plurality of media content instances to be written to the buffer file, wherein each instance of said plurality is stored on one or more clusters in the buffer file;**

**create a normal play time pointer for each stored media content instance, wherein each normal play time pointer points to the location of the cluster or clusters on which its corresponding media content instance is stored;**

**store the normal play time pointers in** maintain a data record for media content instances stored on **the** [[a]] hard disk[[,]];

~~wherein the processor is further configured with the logic to command the device driver to provide normal play time locations of the media content instances for storage of the normal play time locations in the data record, wherein the processor is further configured with the logic to~~

use the normal play time **pointers** locations to reference the media content instances stored in the clusters of the hard disk;

**store a list of the clusters allocated as the buffer file in the data record;**

**maintain the size of the buffer file substantially constant over time, such that when the buffer file approaches a full status, the cluster storing the oldest media content instance is deallocated from the buffer file, and a new cluster is allocated to the buffer file; and**

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

**update the data record as clusters are deallocated from, and newly allocated to, the buffer file.**

21-22. (Canceled)

23. (Currently Amended) The ~~interfacing~~ system of claim **20** [[21]], wherein the processor is further configured with the logic to receive a user request to designate one of the media content instances **stored in** ~~of~~ the buffer file as permanent, wherein the processor is further configured with the logic to designate the requested media content instance as a permanent file.

24. (Currently Amended) The ~~interfacing~~ system of claim 23, wherein the processor is further configured with the logic to **use** ~~pass~~ the normal play time **pointer** ~~locations~~, of the media content instance requested by the user, ~~from the data record to the device driver in order to enable the device driver~~ to locate the requested media content instance.

25. (Currently Amended) The ~~interfacing~~ system of claim 23, wherein the processor is further configured with the logic to **update** ~~receive, from the device driver,~~ the normal play time **pointer** ~~locations~~ corresponding to the permanent file and store the **updated** normal play time **pointer** locations in the data record.

26. (Canceled)

27. (Currently Amended) The ~~interfacing~~ system of claim 20, wherein the processor is further configured with the logic to store in the data record real-time start and stop time values for the **stored** media content instances, wherein the real-time start and stop time values are retrieved from a media content instance guide database, and use the stop time values to determine the stop times of the **stored** media content instances.

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

28. (Currently Amended) The ~~interfacing~~ system of claim 20, wherein the processor is further configured with the logic to receive and store in the data record real-time start and stop buffering times and real-time permanent recording times provided by an operating system.

29. (Currently Amended) ~~An interfacing~~ **A** system **for managing cluster allocation** that ~~enables an application client to interface with a device driver in a client device with persistent storage, comprising:~~

a memory with logic; and

a processor configured with the logic to

**allocate a plurality of clusters of a hard disk as a buffer file;**

**cause a plurality of media content instances to be written to the buffer file, wherein each instance of said plurality is stored on one or more clusters in the buffer file;**

**create a normal play time pointer for each stored media content instance, wherein each normal play time pointer points to the location of the cluster or clusters on which its corresponding media content instance is stored;**

**store the normal play time pointers in a data record for the hard disk;**

use the normal play time **pointers** locations to reference **the stored** media content instances; ~~of a buffer file stored in clusters of a hard disk, wherein the processor is further configured with the logic to~~

designate one of the referenced media content instances of the buffer file as a permanent file;

**maintain the size of the buffer file substantially constant over time, such that when a media content instance is designated permanent, the cluster or clusters on which it is stored are deallocated from the buffer file, and a corresponding cluster or clusters are newly allocated to the buffer file; and**

**update the data record as clusters are deallocated from, and newly allocated to, the buffer file.**



**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

30-31. (Canceled)

32. (Currently Amended) The ~~interfacing~~ system of claim 29, wherein said designation comprises the processor being is further configured with the logic to receive a user request to designate one of the media content instances stored in of the buffer file as permanent, wherein the processor is further configured with the logic to designate the requested media content instance as a permanent file.

33. (Currently Amended) The ~~interfacing~~ system of claim 32, wherein the processor is further configured with the logic to use ~~pass~~ the normal play time pointer ~~locations~~, of the media content instance requested by the user, ~~from a data record to the device driver in order to enable the device driver~~ to locate said media content instance.

34. (Currently Amended) The ~~interfacing~~ system of claim 29, wherein said updating comprises the processor being is further configured with the logic to update ~~receive, from the device driver,~~ the normal play time pointer ~~locations~~ corresponding to the permanent file and store the updated normal play time pointer ~~locations~~ in the ~~the~~ [[a]] data record.

35. (Canceled)

36. (Currently Amended) The ~~interfacing~~ system of claim 29, wherein the processor is further configured with the logic to store in the ~~the~~ [[a]] data record real-time start and stop time values for the stored media content instances, wherein the real-time start and stop time values are retrieved from a media content instance guide database, and use the stop times values to determine the stop times of the stored media content instances.

37. (Currently Amended) The ~~interfacing~~ system of claim 29, wherein the processor is further configured with the logic to receive and store in the ~~the~~ [[a]] data record real-time start and stop buffering times and real-time permanent recording times provided by an operating system.

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

38. (Currently Amended) ~~An interfacing~~ A system **for managing cluster allocation** that enables ~~an application client to interface with a device driver~~ in a client device with persistent storage, comprising:

a memory with logic; and

a processor configured with the logic to:

~~command the device driver to allocate a substantially constant~~ **number of clusters** ~~size portion of a hard disk for a buffer file for buffering media content instances,~~ **wherein a plurality of media content instances are written to the buffer file, and wherein each instance of said plurality is stored on one or more clusters in the buffer file;**

~~wherein the processor is further configured with the logic to maintain a data record for the media content instances stored in clusters of the buffer file;~~ ~~wherein the processor is further configured with the logic to~~

store in the data record real-time start and stop time values of the **stored** media content instances, wherein the real-time start and stop time values are retrieved from a media content instance guide database, and using the stop time values to determine the stop times of the **stored** media content instances;

**create a normal play time pointer for each stored media content instance, wherein each normal play time pointer points to the location of the cluster or clusters on which its corresponding media content instance is stored;**

~~, wherein the processor is further configured with the logic to command the device driver to provide normal play time locations of the media content instances corresponding to the buffer file, the media content instances of the buffer file, and the current write location, wherein the processor is further configured with the logic to receive, from the device driver, the normal play time locations of the media content instances corresponding to the buffer file, the media content instances of the buffer file, and the current write location, wherein the processor is further configured with the logic to~~

store the normal play time **pointers** locations in the data record; ~~wherein the processor is further configured with the logic to~~

**Amendment in Response to Office Action mailed Aug. 8, 2008**  
**U.S. Patent Application No. 10/010,781**

receive a user request to designate one of the stored media content instances of the ~~buffer file~~ as permanent; ~~and designating the requested media content instance as a permanent file, wherein the processor is further configured with the logic to pass-~~

use the normal play time pointer ~~locations~~, of the media content instance requested by the user, ~~from the data record to the device driver in order to enable the device driver to locate the requested media content instance;~~ wherein the processor is further configured with ~~the logic to~~

designate the identified media content instance as a permanent recording file;

maintain the substantially constant number of clusters in the buffer file by a reallocation process in which, when the buffer file approaches a full status, the cluster storing the oldest media content instance is deallocated from the buffer file, and a new cluster is allocated to the buffer file, and when a media content instance is designated permanent, the cluster or clusters on which it is stored are deallocated from the buffer file, and a corresponding cluster or clusters are newly allocated to the buffer file; and

update the data record as clusters are deallocated from, and newly allocated to, the buffer file.